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BULLETIN

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American ferns — VII

LUCIEN MARCUS UNDERWOOD

A. THE AMERICAN SPECIES OF STENOCHLAENA

A short time since we presented an account of the species of *Stenochlaena* from the Old World,* stating that the American species would form the subject of a later paper. We present herewith a synopsis of the known American species, all of which belong to the section *Lomariopsis*. Instead of ten species as estimated at that time, we are forced to recognize twelve; besides these there are several collections which do not seem to fall within the limits of any of the described species, and we have set these aside for further information dependent on more extended exploration in the regions where they have already been collected a single time. A list of these possible candidates for recognition as species is given at the end of this paper under the *Species inquirendae*. All the following species are included under *Acrostichum sorbifolium* in the *Synopsis Filicum* of Hooker and Baker, as was also the case with the greater part of the species of the Old World as discussed and in part figured in our previous paper. One purpose of binomial names is to enable botanists to refer definitely to some particular well-defined plant. There are some, commencing with Goethe, who maintain that this is the only *raison d'être* of species in the text-books anyway. Now if a single name like *Acrostichum sorbifolium* is allowed to stand for a series of twenty-five distinct and recognizable groups of plants, each found in some definite quarter of the tropical world, somewhere from Florida to Brazil,

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* Bull. Torrey Club 33: 35–50. 1906.

[The BULLETIN for November 1906 (33: 541–590, *pl. 18–26*) was issued 19 D 1906.]

around the world to Sierra Leone and Mauritius, thence to India, Java, the Philippines, New Zealand, and Samoa, each with distinctive characters and each with a well-defined geographic range, how is one to know how to refer *definitely* to any particular group of this series, for example the one figured in this paper (FIGURES 1–3) which has a very limited distribution in eastern Cuba, together with a very pronounced type of leaf that no one would possibly mistake for any other? Or how shall we refer to another very definite plant of the lowlands of Florida and Cuba which we have recently seen fit to describe as *Stenochlaena Kunzeana** and which is figured in this paper (FIGURES 4–6)? It is true they could be referred to as varieties of *Stenochlaena sorbifolia;* so could our species of soft maples be referred to as varieties of the sugar maple, but I believe none of our so-called conservatives has thought of such a course, even though the foliage of the maples is really much closer than the two plants in question. Besides, we do not know which is the parent stock and which is the variation, or better we do know that both have diverged from a common ancestor in the past so that neither one could with accuracy be said to be a variety of the other. Being distinct recognizable entities, we prefer to call these units of classification *species*, the same as we do our well recognized species of maples and other plants of a similar sort.

Linnaeus founded *Acrostichum sorbifolium* on two things that turn out to be distinct. One was a plant figured by Plumier from Martinique (afterwards copied by Petiver), and the other was a plant figured by Sloane from Jamaica. The acquisition of the extensive herbarium of Père Duss from the islands of Martinique and

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*We are gravely informed by the confident editor of the Fern Bulletin (14 : 95) that this species is *Lomaria procera!* and that "the [Florida] plant reported by A. A. Eaton as *Acrostichum sorbifolium* is also omitted" [*i. e.*, in the last number of this series of papers]. *Lomaria procera* was originally described from New Zealand and like its congeners of the mountain regions of the West Indies is a terrestrial fern growing in a crown after the manner of our native Christmas fern, and like other species of *Lomaria* possesses a distinct linear intramarginal sorus covered by an indusium; while *Stenochlaena Kunzeana*, originally designated (but not described) by Presl seventy years ago from the lowlands of Cuba, is a climbing fern with scattered leaves, creeps up the trunks of trees three or four meters, and like other members of its genus possesses no indusium and not even a definite sorus. Mere details (?) of structure, habit, geographic and altitudinal distribution like these, seem to amount to nothing in the mind of the editor of "the only fern magazine in the world."

Guadeloupe places the New York Botanical Garden in possession of the most complete series of plants from those islands that has ever been brought together. Specimens of *Stenochlaena* in this herbarium, as well as older collections from Martinique seen in European herbaria, when compared with the recent extensive collections in the island of Jamaica, have enabled us clearly to differentiate the plant of the Lesser Antilles, which extends also into Porto Rico and Hispaniola, from the Jamaican plant, more or less common in the hill region of that island.

Each one of the species described or recognized in this paper has a very definite geographic area as determined from a study of practically all the material that has yet been collected. The species are most abundantly represented in our own collections, but the materials at Vienna, Prague, Berlin, Paris, Kew, Washington and New Haven have contributed type specimens and additional information.

The American species which we recognize may be separated by the following synopsis :

- Pinnae tapering gradually in the lower third, truncate-acuminate at the apex; sporophyllary pinnae narrow (3–4 mm.). 12. *S. Wrightii.*
- Pinnae blunt or cuneate at base, but never long-tapering below.
  - Pinnae mostly 2–4 cm. wide; sporophyllary pinnae 7–16 mm. wide.
    - Pinnae few (1–5). 8. *S. Prieuriana.*
    - Pinnae more numerous (7–20 or more).
      - Sporophyllary pinnae 12–16 mm. wide; scales of the rootstock and bases of the leaf-stalks brownish-black. 5. *S. japurensis.*
      - Sporophyllary pinnae 7–8 mm. wide.
        - Scales of the rootstock and bases of the leaf-stalks narrowly lanceolate, ferruginous; sporophyllary pinnae mostly 12 cm. long. 2. *S. erythrodes.*
        - Scales of the rootstock and bases of the leaf-stalks broad, ovate, pallid; sporophyllary pinnae shorter, 6–9 cm., stalked. 4. *S. jamaicensis.*
  - Pinnae normally under 2 cm. wide; sporophyllary pinnae under 5 mm. wide (except in no. 7).
    - Pinnae irregularly sharply serrate, not over 1 cm. wide, cuneate at the base. 6. *S. Kunzeana.*
    - Pinnae entire, undulate, or slightly and uniformly serrulate or denticulate.
      - Pinnae truncate at the base.
        - Pinnae 7–8 cm. or more long; sporophyllary pinnae 3 mm. wide. 3. *S. Fendleri.*

Pinnae 4–7 cm. long; sporophyllary pinnae under 2 mm wide. 11. *S. vestita.*
Pinnae cuneate at base (acute or obtuse).
Pinnae 4–8 cm. long.
Pinnae 20–25-jugate; sporophyllary pinnae nearly sessile; scales of the rootstock long-hairy ciliate. 1. *S. angusta.*
Pinnae 10–15-jugate; sporophyllary pinnae stalked; scales of the rootstock smooth. 10. *S. sorbifolia.*
Pinnae 10–15 cm. long, tapering to a long-acuminate apex.
Sporophyllary pinnae 5–6 mm. wide, 9 cm. long, long-stalked. 7. *S. Maxoni.*
Sporophyllary pinnae not over 2 mm. wide, 10–12 cm. long, short-stalked. 9. *S. recurvata.*

1. **Stenochlaena angusta** sp. nov.

Wide-climbing on trees. Roostock rather slender, 4–8 mm. thick, densely covered at the apex with pale, narrowly lanceolate, long-ciliate scales, becoming naked below; leaves scattered, narrow, tapering at both ends, 45–60 cm. long, with a short stalk (6–8 cm.) which is densely covered below with scales like those of the rootstock, and with still narrower scattered fibrils which extend up the rachises; pinnae 20–25-jugate, obtusely cuneate at base forming a very short stalk, 6–7 cm. long, 10–12 mm. wide, the margins finely and deeply undulate, tapering at the more or less falcate apex into an acuminate point; veins simple or once forked, rather close, with 11–15 intercostal spaces to 1 cm.; sporophyls slightly shorter than the leaves, the pinnae 22–25-jugate, 55–8 cm. long, 3–4 mm. wide, obtuse at the base with a short stalk, tapering gradually to the apex. [FIGURE 6.]

COLOMBIA: Jordan, Prov. Santa Marta, *H. H. Smith 1051* (type). "Creeping on tree trunks to 15 feet or more. Rare in deep forest, 1200–1400 feet."

To the same species we should refer *Funck 774* collected in 1845 (P) * and *Spruce 1556* collected at Tarapoto, Peru (K). Also more or less fragmentary recent collections from Bolivia: Lower Rio Cocos, *Williams 1190;* San Raphael, *Williams 1189;* and more doubtfully the juvenile forms, Isapuri, *Williams 1203.*

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* Unless otherwise stated, specimens cited are in the collections in the New York Botanical Garden. For convenience other collections are marked with an initial: K = Kew, B = Berlin, P = Paris, Pr = Prague, V = Vienna, etc.

2. **Stenochlaena erythrodes** (Kunze).

Acrostichum erythrodes Kunze, Flora **22**[1]: Beibl. 46. 1839. (Type from Ilheos, Brazil, *Herb. Mart. 366.*)

RANGE: Brazil, Prope Ilheos, *Herb. Mart. 366; Sellow* (B); Organ Mountains, *Gardner* (?) *101* (K).

In *Index Filicum*, Mr. Christensen refers this plant with two other species of the genus to *Stenochlaena marginata* (Schrad.) C. Chr., the original of which was described by Schrader in 1824 in his report on the ferns collected in Brazil by Maximilian, Prince of Neuwied, as follows: "[LOMARIA] MARGINATA: *frondibus pinnatis; sterilium pinnis oblongo-acuminatis subintegerrimis basi superiori cuneatis glabris indusiis crenato-incisis rhachi marginata.*" Goett. Gel. Anz. 871. 1824. In the absence of the type and with such a description it would seem safer to leave this name in the waiting list until more certainty is attainable in regard to its status; if the description is correct, the plant is not even a *Stenochlaena*. In any case the three united species have little in common and can easily be distinguished, when real specimens are at hand.

3. **Stenochlaena Fendleri** (D. C. Eaton).

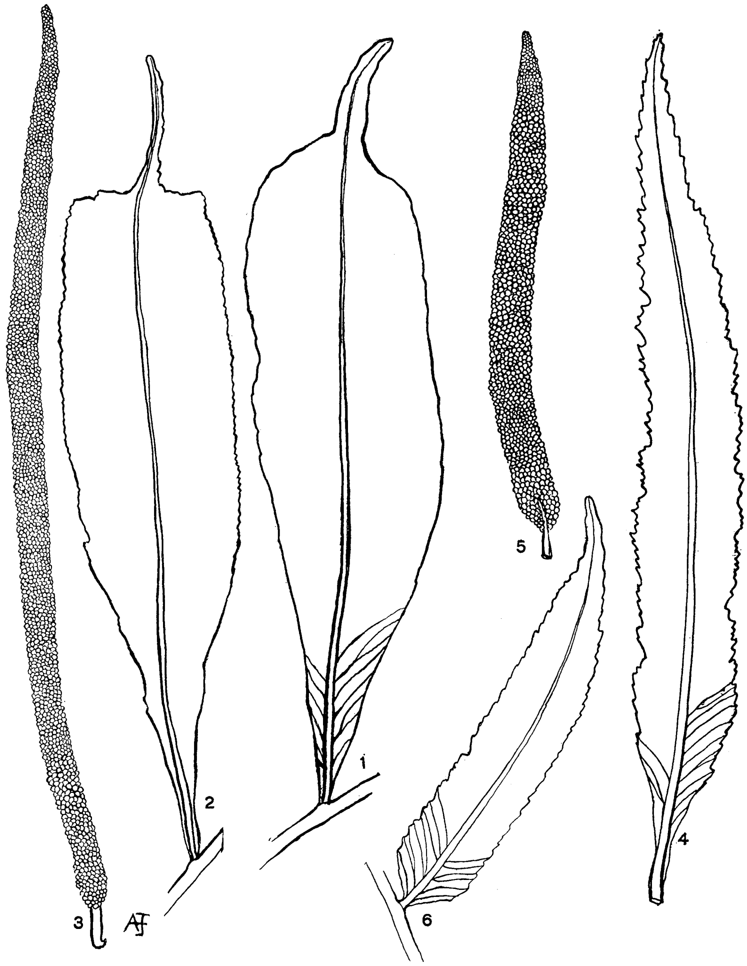
Lomariopsis Fendleri D. C. Eaton, Mem. Am. Acad. II. 8: 195. 1860. (Type from Venezuela, *Fendler 335.*)

RANGE: Known only from its type locality. [FIGURES 9 and 10.]

4. **Stenochlaena jamaicensis** sp. nov.

Wide-climbing on tree-trunks. Rootstock 1.5–2 cm. in diameter, densely covered with pallid ciliate scales which are broadly lanceolate to lanceolate-ovate in shape, 2–3 mm. wide; leaves 50 cm. or more long on stramineous stalks 12–14 cm. long, densely covered at the base with scales similar to those of the rootstocks, simply pinnate, 5–10-jugate, the pinnae obtusely cuneate at the base, more or less abruptly tapering at the apex, 8–12 cm. long, 2–2.5 cm. wide, the margins slightly repand and very minutely revolute in drying; veins simple or occasionally forked, inconspicuous, with about 10–11 intercostal spaces to 1 cm.; sporophyls 35 cm. or more long, on similar but shorter (8–10 cm.) leaf-stalks, about 9-jugate; pinnae short-stalked (3–4 mm.), obtuse at base, short-tapering at the apex, 7–8 cm. long by 7–8 mm. wide. [FIGURES 13 and 14.]

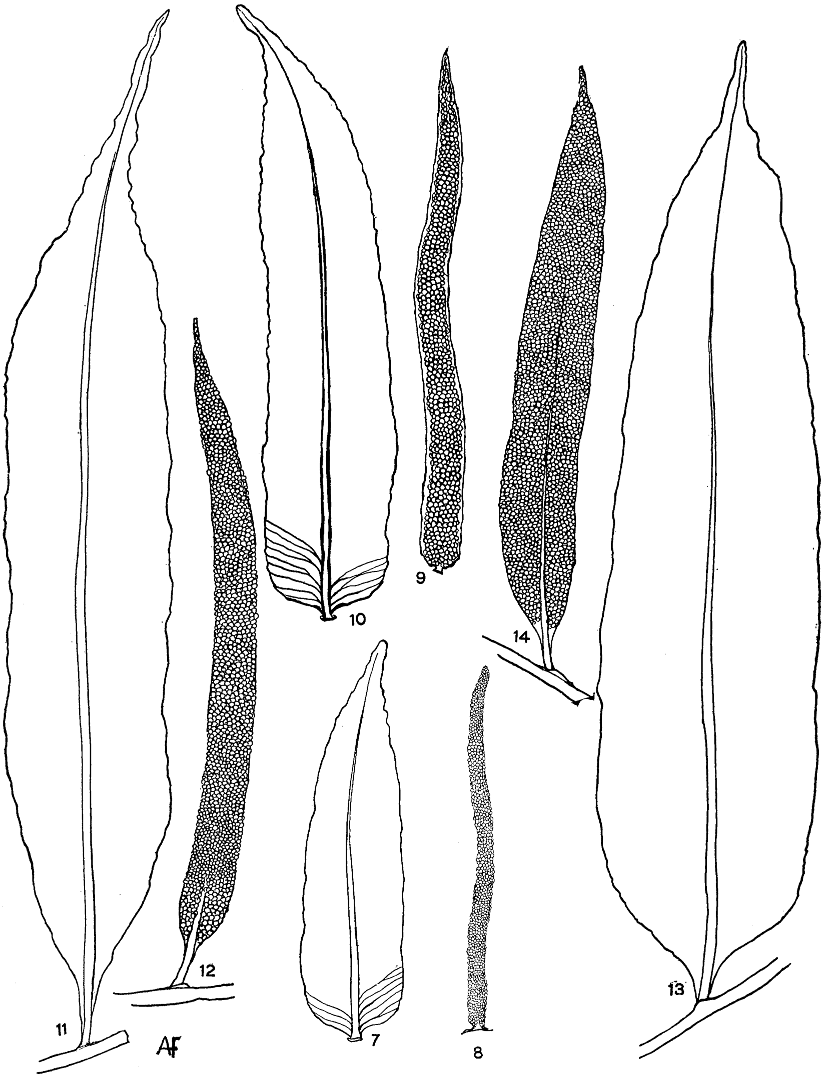
JAMAICA: Vicinity of Mandeville, *Maxon 2566* (type, in the United States National Herbarium and the New York Botanical Garden); Manchester, *Day;* no locality, 1884–5, *Balch.*



Normal pinnae of American species of *Stenochlaena:* 1–3, *S. Wrightii.* 4, 5, *S. Kunzeana.* 6, *S. angusta.* All the figures natural size.

Besides the above, the following mostly sterile plants appear to go here: Hollymount, *Maxon 1904, 2217;* Tyre, Cockpit country, *Underwood 3305;* Mansfield, near Bath, *Underwood 2782.*

Young forms collected with the last number seem to indicate a widely different juvenile condition from that which obtains in the common Windward Island species (*S. sorbifolia*) from which this is a segregation. In the last-named species the juvenile form is



Normal pinnae of American species of *Stenochlaena*: 7, 8, *S. vestita*. 9, 10, *S. Fendleri*. 11, 12, *S. Maxoni*. 13, 14, *S. jamaicensis*. All the figures natural size.

so unlike the mature condition as often to be regarded as belonging to an entirely different species. In the present species the juvenile leaves fail to show this strongly dimorphic character. Further material bearing on this point is a desideratum.

5. STENOCHLAENA JAPURENSIS (Mart.) Griseb. Fl. Brit. W. I. 676. 1864.

Acrostichum japurense Mart. Ic. Pl. Crypt. Bras. 86. *pl. 24.* 1834. (Type from Japura River, N. Brazil.)

Lomariopsis phlebodes Kunze, Linnaea **9**: 33. 1835. (Type from Maynas, Peru, *Poeppig.*)

RANGE: Guatemala and Costa Rica to Trinidad, Guiana, and Brazil and down the Andes as far as Bolivia and Peru. Apparently a lowland species. We have specimens as follows:

GUATEMALA: Cubilquitz (Alta Verapaz) *von Tuerckheim* (*J. D. S. 8043*).

COSTA RICA: Turrialba, *Maxon 184.*

TRINIDAD: *Fendler 106.*

PANAMA: *Hayes 4.*

GUIANA: Essequibo, *Jenman 2312*; Mt. Ragwa, *Jenman*; Demerara River, *Jenman.*

COLUMBIA: San Pablo, *Holton 21*; Santa Marta, *H. H. Smith 2697.*

BOLIVIA: Tumupara, *Williams 1192*; San Buena Ventura, *Williams 1196.*

The species does not appear to have been collected much below the Amazon in Brazil, but there are specimens at Kew collected in the Upper Amazon, *Traill 1394*, and Para, *Spruce 27* and *569*. We have seen Poeppig's plant (cotype of *Lomariopsis phlebodes*) at Vienna and it does not appear to be separable from the widely distributed species as listed above. This species and *S. erythrodes* of Southern Brazil are united under a distinct name (noted above) by Christensen in his *Index Filicum.*

6. STENOCHLAENA KUNZEANA (Presl) Underw. Bull. Torrey Club **33**: 196. 1906. (Type from Cuba, *Wright 973.*)

Olfersia Kunzeana Presl, Tent. Pterid. 235. 1836 (*nomen nudum*).

RANGE: Cuba, Hispaniola, and southern Florida. (FIGURES 4 and 5.)

Additional stations to those given with the original description are as follows:

CUBA: El Guama (Prov. Pinar del Rio), *Palmer & Riley 392*; Sevilla Estate near Santiago, *Taylor 473*.

7. **Stenochlaena Maxoni** sp. nov.

Climbing on tree-trunks. Rootstock wide-creeping, 8–10 mm. in diameter, densely covered with pale straw-colored, narrowly lanceolate scales, which are usually less than 1 mm. wide; leaves scattered, 65 cm. or more long, on long, rather stout leaf-stalks, 25 cm. long, which have scattering scales throughout like those of the rootstock intermixed with brown fibrils which extend upwards through the rachises; pinnae about 9-jugate, distant, rather long-stalked (5–7 mm.), acutely cuneate at the base, long-acuminate at the apex, 12–14 cm. long, about 2 cm. wide, the margins irregularly undulate, very slightly reflexed in drying; veins very prominent, converging in pairs at the base when simple, occasionally forked, somewhat spaced, with about 8 intercostal spaces to 1 cm.; sporophyls 55 cm. or more long, with leaf-stalks similar to those of the leaves, about 10-jugate, the pinnae distant, stalked (4–6 mm.), obtuse at base, tapering at apex, 9 cm. long, 5–6 mm. wide. [FIGURES 11 and 12.]

COSTA RICA: La Palma, alt. 1450–1550 m., *Maxon 411*.

It is with pleasure that we name this clearly marked species from Costa Rica for Mr. William Ralph Maxon through whose discriminating and careful field study we know so much of the real characters of the fern flora of Costa Rica. The practice of sending specialists into the field is of the greatest importance if we ever expect to secure accurate information regarding the real characters of plants.

8. **Stenochlaena Prieuriana** (Fée).

Lomariopsis Prieuriana Fée, Mém. Foug. **2**: 66. *pl. 25. f. 1.* 1845. (Type from Guiana, *Herb. Richard.*)

RANGE: Known only from Guiana, *Appun 128* (K); Pomeroon River, *Jenman*; Potaro River, *Jenman*; Ragwa, *Jenman.*

This species has been combined with *Stenochlaena japurensis*, with which it has closest alliance; its limited number of pinnae is apparently a constant character, and until this is found to be due to accidental causes it may best remain distinct as Fée left it.

9. **Stenochlaena recurvata** (Fée).

Lomariopsis recurvata Fée, Mém. Foug. **2**: 68. *pl. 28.* 1845. (Type from Teapa, Mexico, *Herb. Delessert et Mus. Paris.*)

RANGE: Known only from its type collection, of which we have seen the specimen preserved at Paris. A very distinct species.

10. STENOCHLAENA SORBIFOLIA (L.) J. Sm. Jour. Bot. **4**: 149. 1841.

Acrostichum sorbifolium L. Sp. Pl. 1069. 1753. (Type from Martinique, based on Plumier *pl. 117.*)

RANGE: Lesser Antilles, Porto Rico, and Hispaniola.

We have seen specimens of this characteristic species, whose distribution has been erroneously supposed to be well-nigh universal, from the following islands:

MARTINIQUE: *Duss 1698.*

GUADELOUPE: *Duss 4139.*

DOMINICA: *Lloyd 344, 743, 744, 869.*

ST. VINCENT: *Guilding* (K), *Chickley* (B).

ST. KITTS: *Hon. J. H. H. Berkley, Britton & Cowell 454.*

PORTO RICO: 1824, *Balbis* (P), *Schwanecke* (K), *Booth* (K), *Underwood & Griggs 843, Britton & Marble 1084.*

HISPANIOLA: Petit Borgne, *Nash 468.*

11. **Stenochlaena vestita** (Fourn.). [FIGURES 7 and 8.]

Lomariopsis vestita Fourn. Bull. Bot. Soc. France **19**: 250. 1872. (Type from Chontales, Nicaragua, *Levy 476.*)

Acrostichum Pittieri Christ, Bull. Soc. Bot. Belg. **35**: 243. 1896. (Type from Costa Rica, *Pittier 6931.*)

Lomariopsis guatemalensis Presl, in herb. (Sterile plant only. "In Guatimala ad ripam occidentalem fluvii S. Juan, *Friedrichsthal.*")

Stenochlaena Pittieri Diels, Die Nat. Pflanzenf. **1**^{4}: 251. 1899.

RANGE: Apparently throughout Central America. We have seen specimens as follows:

GUATEMALA: Alta Verapaz, *von Tuerckheim* (*J. D. S. 8042*), San Juan River,* *Friedrichsthal* (V, Pr).

NICARAGUA: Chontales, *Levy 496* (K, P), *Tate 72* (K, two sheets).

COSTA RICA: La Concepcion, *J. D. S. 6942; Wercklé;* Turrialba, *Maxon 163.*

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* There appears to be some doubt whether this station is in Guatemala or not.

PANAMA: Lion Hill Station, *Hayes 379* (K).

This species, which was first named (though not published) by Presl sixty years or more ago, and twice published since, is rather close to *S. Fendleri*, and the Panama specimen cited above suggests a possible transition between the two. In the absence of any more definite light on this subject it is wiser to keep them separate for the present.

12. STENOCHLAENA WRIGHTII (Mett.) Griseb. Cat. Pl. Cub. 277. 1866.

Lomariopsis Wrightii Mett.; D. C. Eaton, Mem. Am. Acad. II. 8: 195. 1860. (Type from Monte Verde, eastern Cuba, *Wright 787*.)

RANGE: Confined to eastern Cuba. [FIGURES 1–3.]

This most peculiar species has been twice collected since Wright's time at a second station still farther eastward than Monte Verde, *viz.*: at Baracoa, *Pollard & Palmer 220*, and on the slopes of El Yunque, near Baracoa, *Underwood & Earle 948*.

SPECIES INQUIRENDAE

1. We have collected in Jamaica what appears to be a very distinct species with small pinnae (4–5.5 cm. by 1.2–1.5 cm.) which are about 13-jugate on short stalks, acutely tapering at the base, and the rootstocks densely covered with dark ferruginous narrowly lanceolate ciliated scales, 1 mm. wide. The veins are very close (12–15 intercostal spaces to 1 cm.). Unfortunately only immature sporophyls have been found; hence our hesitancy to describe what appears to be distinct. The plants were collected in the Cockpit country near Troy, *Underwood 2866* and *2887* (the latter sterile only).

The present genus illustrates excellently the doubt often occasioned by improper field work. There are in various collections a series of scrappy specimens often consisting of the upper half of a leaf only or sometimes with a similar upper portion of a sporophyl unconnected with the leaf, and neither showing anything of the character of the stem, which in this genus, as in most others, presents most important diagnostic specific characters. To break off the mere tip of a fern as a representative of a species is as idiotic a proceeding as to break off the upper half of a compound leaf of ash or hickory or sumac and expect a botanist to describe a species from this fragment only. And yet a very large number of fern species have been described from just such fragments and their types are often of such a character that after real personal field work in the type locality of a given species, it is only with the greatest uncertainty that we can recognize the elegant and complete specimens of modern collecting as the same as these old fragments, especially after they have been handled for two or three generations. We have a series of these fragments from Jamaica and elsewhere that are now in doubt and will very likely remain in this condition to the end of time. One hesitates to throw away an imperfect specimen after it has once been mounted in a collection, but it might be better except, of course, in the case of old types to commit them to the flames and save succeeding generations from wasting gray matter on them.

2. *Fendler 121*, from Trinidad (distributed by Professor D. C. Eaton as *Acrostichum sorbifolium*), probably represents a distinct species. We had long supposed that this represented *Lomaria longifolia*, a species described by Kaulfuss in 1824, citing: (1) Willdenow's description of *Acrostichum sorbifolium* (Sp. Pl. 5: 115, *excl. syn.*), and (2) a figure of a separate pinna by Plumier on plate 117 (the type of *Acrostichum sorbifolium* L.). An examination of Willdenow's herbarium shows that he had under this species a plant with elongate pinnae, which seems to differ in no other way from the ordinary *Stenochlaena sorbifolia*, and analogous specimens appear in Père Duss' collections both from Martinique and Guadeloupe, as well as in those of Sherring from Grenada, and among those of Lloyd from Dominica.

The Trinidad plants differ more widely (1) in the vestiture of the bases of the leaf-stalks and the rootstocks, the scales being densely long-hairy and ciliate, while they are smooth in *S. sorbifolia;* (2) in the form of the pinnae and their basal characters; (3) in the closeness of the venation, there being 11–12 intercostal spaces to 1 cm. (instead of 7–9 as in *S. sorbifolia*); and in various other characters. Unless further information appears, *Lomaria longifolia* Kaulf. will become a synonym of *S. sorbifolia*, but the Trinidad plants may come to be recognized as a distinct species of *Stenochlaena*.

3. A single specimen from Potrero, Mexico, *Hahn 56*, in herb. Paris, indicates a species distinct from any known. The pinnae are 9 by 2.5 cm., with prominent veins, while the sporophyllary pinnae are narrowly linear, 13 cm. long by 3 mm. wide. The specimens were distributed as *S. erythrodes* but of course have nothing to do with that South Brazilian species. Potrero is in the state of Hidalgo.

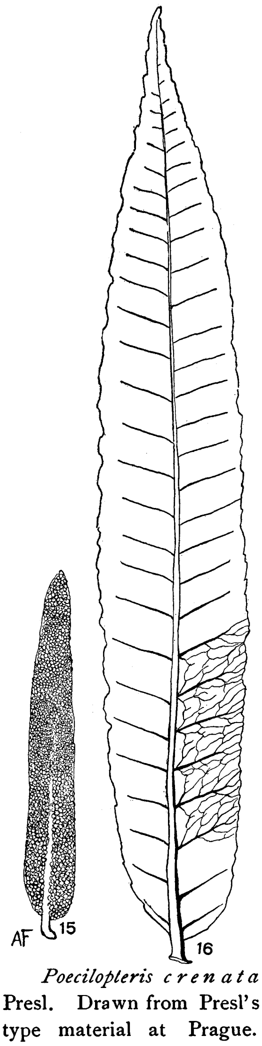
4. Two specimens in herb. Berol.: Bahia, *Luchnath 86*, and *Sellow* (without locality), were marked by Klotzsch as a new species in *Olfersia* but apparently have not been described. They represent a species of *Stenochlaena* which recalls *S. Maxoni* as described above, but have marked differences. The pinnae are acute at base but are sessile, 11–12 by 2 cm., tapering to an acuminate point; the sporophyllary pinnae are 6–7.5 cm. long by 4 mm. wide and also sessile. The two specimens are not quite counterparts of each other, the Luchnath specimen having the sporophyllary pinnae up to 9 cm. long. They probably represent a good species which had best await further exploration in the little-known regions of Brazil.

5. A second specimen from Brazil, collected by Sellow, also in herb. Berol., bears a second unpublished name by Klotzsch under *Olfersia*. It has pinnae rounded at the sessile base, 17 by 2.5 cm., tapering gradually to the apex; the sporophyllary pinnae are 10 cm. long by 6 mm. wide; the veins are close, 12 or more intercostal spaces to 1 cm. This plant is not like any described species and is probably new, as indicated in Klotzsch's herbarium name.

The genus *Olfersia*, containing the common *Olfersia cervina* of the American tropics and a second Brazilian species which is the type of the genus (*O. corcovadensis*), is characterized by its distinct marginal vein with which the other veins unite; its sporophyls are similar to those of *Polybotrya* but simpler. It is not a near ally of *Stenochlaena*.

B. THE STATUS OF POECILOPTERIS CRENATA PRESL

The genus *Leptochilus* was founded by Kaulfuss in 1824, based on *Acrostichum axillare* Cav. This long-known plant possesses a simple leaf with the complex venation of *Drynaria*, *Tectaria*, and *Phymatodes*. Whether all the species with this type of anastomosing veins, formerly associated erroneously under the genus *Gymnopteris* (*Acrostichum* § *Gymnopteris* of *Synopsis Filicum*), will form a single genus, or be differentiated into several, as held by Presl, John Smith and Fée, may well form a later discussion. Suffice it to say that the American species, elaborately treated by Carl Christensen under *Leptochilus* § *Bolbitis*,[*] in our opinion are not congeneric with *Acrostichum axillare*, and as a coherent group must bear the name *Poikilopteris*[†] as the oldest name applied to any species included within the present generic limits. Their venation is amply characterized in the illustrations given in Mr. Christensen's admirable paper and may be seen in the accompanying figure (FIGURE 16). We do not purpose a duplication of Mr. Christensen's work, but having seen nearly all the original specimens cited in his paper, and in addition the equally extensive collection at Kew which materially supplements those cited, and particularly the originals of Presl at Prague, we wish to make a correction regarding the status of one of the doubtful species cited at the close of his paper.



Poecilopteris crenata Presl. Drawn from Presl's type material at Prague. 15, Sporophyllary pinna. 16, Normal sterile pinna. Both natural size.

Mr. Christensen says (page 297): "*Poecilopteris crenata* Presl, Epim. bot. 174. 1849.—Rio. After a remark on a sheet in Herb. Berol. (by Mettenius ?) and after the description this is only a common form of *L. serratifolius*."

The above quotation notes the usual European neglect to look up type specimens so easily accessible as those in Presl's herbarium, and also emphasizes the force of a statement that cannot be reiterated too often, *viz.*: "A species is not a description, but a group of allied individuals," in this case represented by a single well-preserved type specimen. The accompanying figures (15–16) are drawn directly from Presl's *Poecilopteris crenata* and it will be seen to be, not the plant to which it has been erroneously referred by those who have never seen it, but instead a species closely allied to the one described in Mr. Christensen's paper as *Leptochilus contaminoides* (Christ) C. Chr. Having seen the type number of the Paraguay plant both at Berlin and at Kew, and the Brazilian specimens also referred by Mr. Christensen to Christ's species, we are inclined to regard the Paraguay plant as distinct from the others, and refer all the Brazilian plants cited to Presl's species. Otherwise Dr. Christ's species must fall under it in synonymy. We present the following comparisons of *Balansa 2852* and Presl's plant:

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[*] Bot. Tidsskrift **26**: 283–300. 1904.

[†] Eschweiler, Linnaea **2**: 117. 1827; afterwards (1836) called *Poecilopteris* by Presl.

Balansa 2852 (Type of *Gymnopteris contaminoides* Christ).	*Poecilopteris crenata* Presl. (*Cf.* FIGURES 15 and 16.)
Pinnae 3.5 cm. wide.	Pinnae 2 cm. wide.
Color bright-green.	Color distinctly red.
Margins regularly crenate-toothed.	Margins irregularly undulate.
Areolae in 5 (4–6) rows between the costae.	Areolae in 4 (3–5) rows between the costae.
Sporophyllary pinnae 8 mm. wide.	Sporophyllary pinnae 6 mm. wide.

At a later time we hope to add something to the series of species so well described by Mr. Christensen, when the other species may be more appropriately transferred to what we regard their correct generic name, *Poikilopteris*.

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